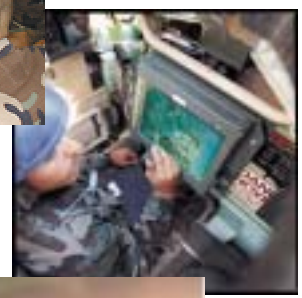
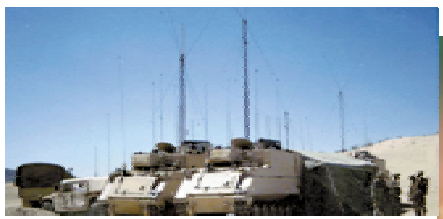
ATEC Industry Days

27 April 2004
San Diego, CA
Denise De La Cruz



Over 50 years of C4I testing



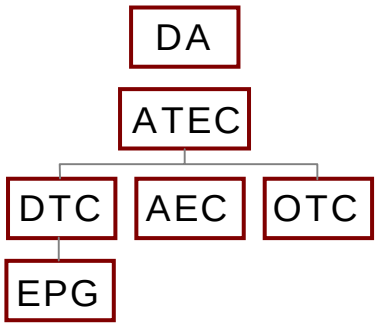
Mission Core Competencies

- √ Distributed systems of systems
- √ Network-centric systems
- √ Command & control
- √ Communications & computers
- √ GPS/Navigation
- √ E3
- √ IEW
- √ Info assurance
- √ MANPRINT/RAM
- √ Sensors

MISSION: Our mission is to support the acquisition process through rigorous and robust testing of C4ISR systems.

VISION: A customer-focused, value-added organization that leverages emerging C4ISR technologies to meet the needs of the warfighter.

Who We Are



PERSONNEL

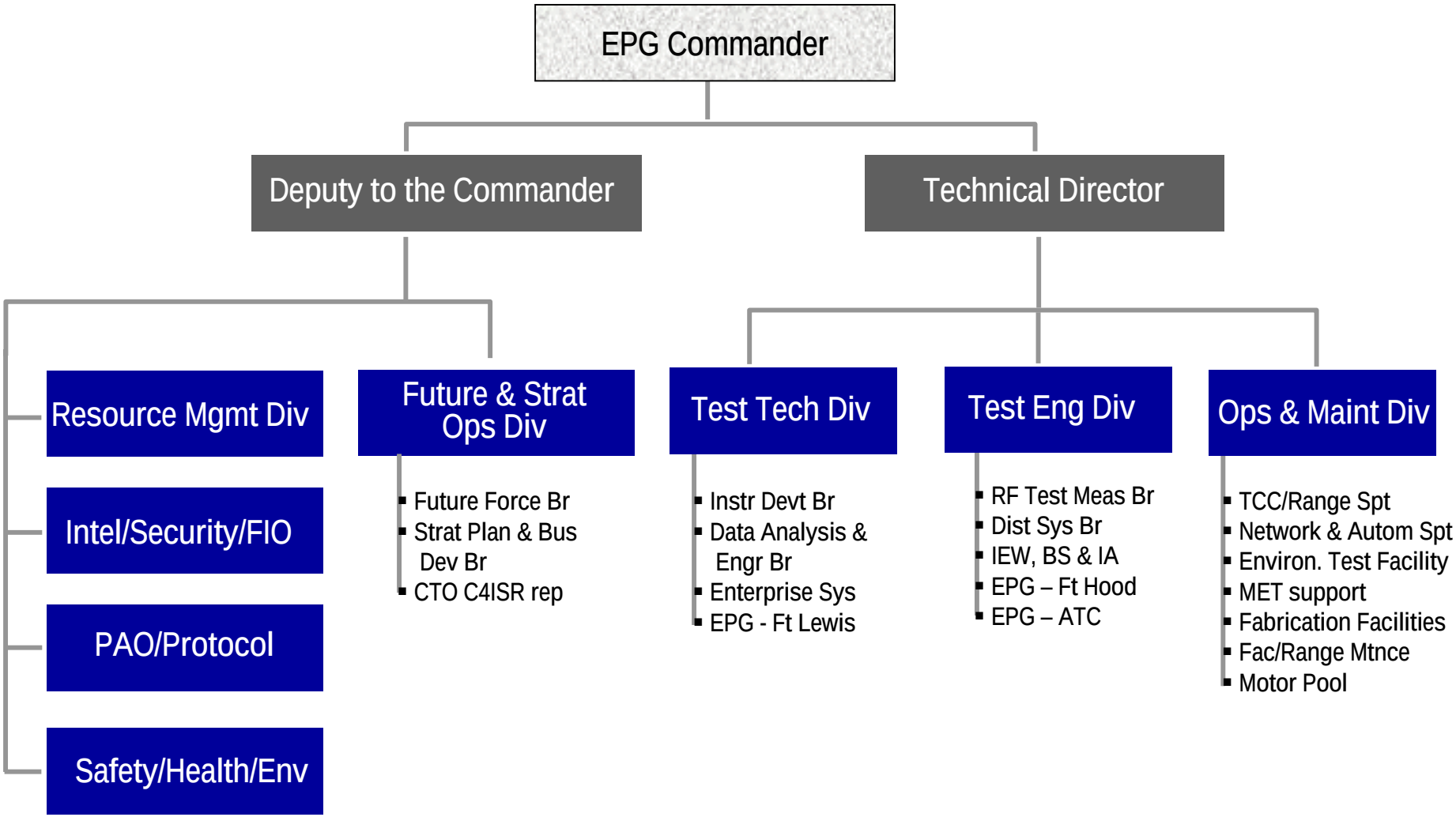
Mil	1
Gov	130
Cont	392
TOTAL	523

Authorized/Assigned to EPG

2/1 – Military
120/130 – Civilians
392 - Contractors

Avg yrs of service = 18.7
55% Bachelors degree or higher
68% Professional and technical job series

How We're Structured



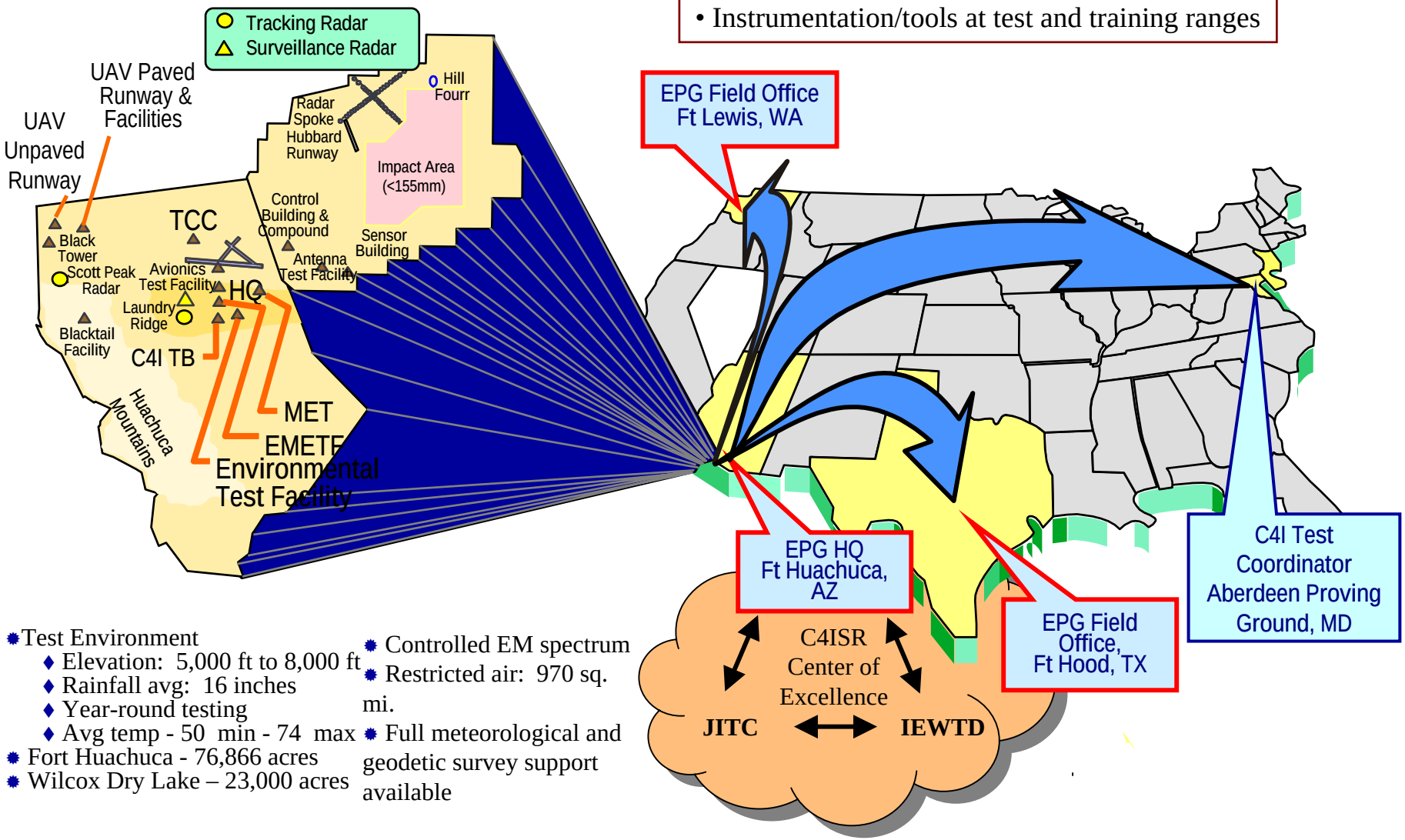
United States Army

Electronic Proving Ground

The Army's C4I Developmental Tester

Where We Are

- Mobile test capability
- Strong partnership with OT community
- Instrumentation/tools at test and training ranges



- Test Environment
  - Elevation: 5,000 ft to 8,000 ft
  - Rainfall avg: 16 inches
  - Year-round testing
  - Avg temp - 50 min - 74 max
- Fort Huachuca - 76,866 acres
- Wilcox Dry Lake – 23,000 acres
- Controlled EM spectrum
- Restricted air: 970 sq. mi.
- Full meteorological and geodetic survey support available

United States Army

Electronic Proving Ground

The Army's C4I Developmental Tester

How We Test

C4ISR Unique Facilities

Test Control Complex

Antenna Test Facility

- 3 major systems
- 240 nm range

Tracking & Surveillance Radars

Fabrication Facility

What We Test

- Airborne, ground-based, waterborne platforms
- Distributed systems of systems
- Network-centric systems
- Command & control systems
- Communications & computer systems
- GPS/Navigation systems
- IEW systems

167 wheeled vehicles

Motor Pool

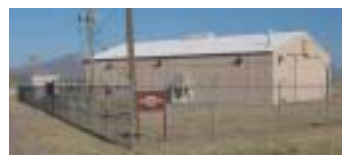
Environmental Test Facility

TEST BEDS

EMI/TEMPEST Test Facility

GPS Test Bed

Tactical Radio Test Bed

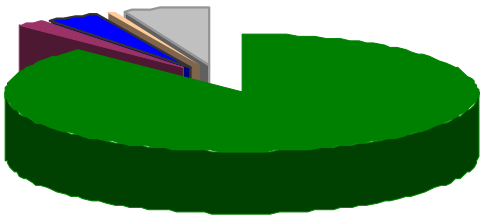


Information Assurance Test Facility

Our Customers

FY03

Total supported programs = 219

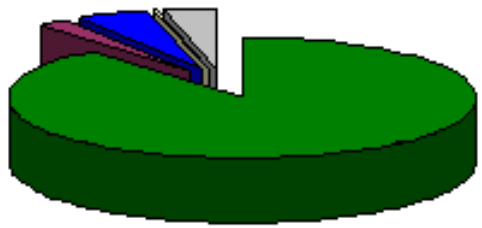


191	Army
5	Navy
9	Air Force
1	Marines
13	Other

- Program Executive Offices
- ATEC
- Air Force
- Marine Corps
- Academia
- Army
- Navy
- Govt, Non-DoD
- U.S. Industry
- Training Community

FY04

Total supported programs = 227



202	Army
5	Navy
11	Air Force
1	Marines
8	Other

Supporting Real World Missions

Transformation

Supporting the Future Force

- **Stryker**
- **Joint Tactical Radio System**
- **Land Warrior**
- **Unmanned Aerial Vehicle**
- **Warfighter Information Network –Terrestrial**
- **Future Combat Systems**

Army at War

Operation Iraqi Freedom

- **Deployed Systems Engineer with III Corps to work joint & coalition interoperability**
- **Deployed personnel to 4th Infantry Division to maintain tactical operations center comms**
- **Provided 11th Signal Brigade communications software planning tool**
- **Supported 1st Stryker Brigade Combat Team deployment train up**

Homeland Defense

Supporting Our Nation

- **Research and development**
- **Testing new technologies**
- **Technology transfer**
- **Training**

System of Systems Distributed Test Process

Test Command & Control

Starship

STIMULATION/ SIMULATION

- MESSAGE TRAFFIC LOADING
- VOICE LOADING
- LIVE OPERATORS
- SIMULATED ENTITIES

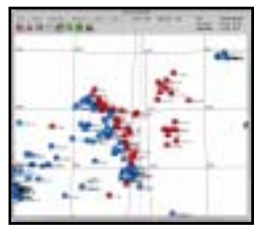
DATA COLLECTION

- INFO EXCHANGE DATA
- PROTOCOL DATA
- SYSTEM PARAMETERS
- DATABASE INFO

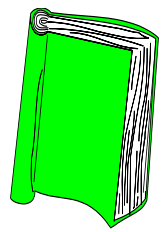
REDUCTION & ANALYSIS

- TECHNICAL PERFORMANCE
- OPERATIONAL LEVEL III
- AFTER-ACTION REPORTS

PRODUCTS



DATA



REPORT

C4I Test Toolkit (by category) [1 of 2]

▪ **Test planning**	* **Stargen** **Orion**
▪ **Test C2**	* **Starship** **Autonomous agents**
▪ **Sim/Stim**	* **(RICS)^2** [Remote Reconfigurable Intelligent Instrumentation to Collect, Control, Simulate, & Stimulate] **Pinger, TGEN** [Traffic Generator] * **DAUVS** [Digitized Army USMTF/VMF Stimulator] **STORM** [Simulation Test Operations Rehearsal Model], including ***RPWS** [Role Player Work Station] **MCREWS** [Modular Covert Remote EW Simulator] **Orion** **SAS** [Simulation Application Suite]
▪ **EW**	**Live jammers** **MCREWS**

* component of C3 Driver

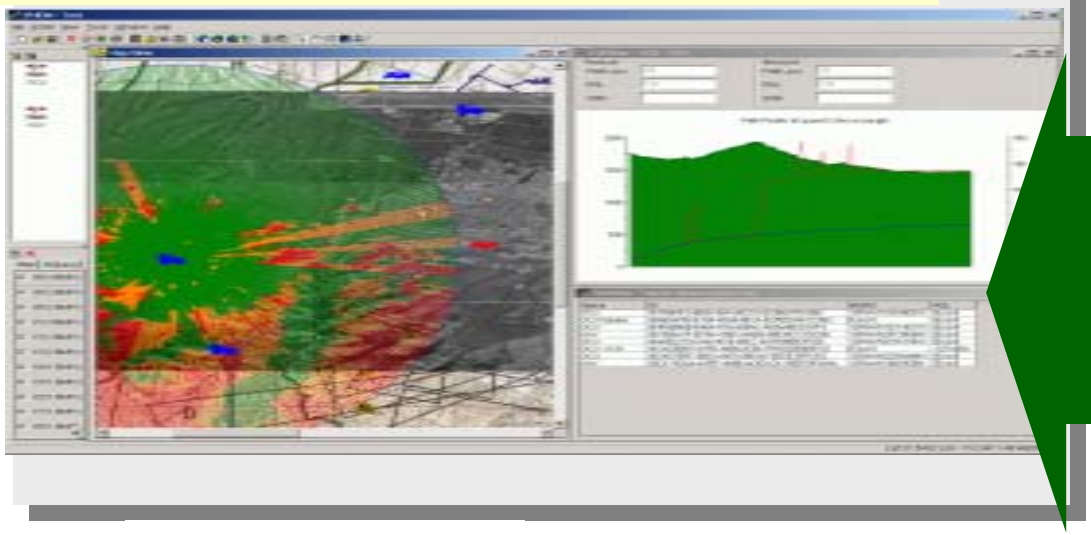
C4I Test Toolkit (by category) [2 of 2]

▪ **Digital data collection**	* **(RICS)^2 HSLT** [High Speed LAN Tap], **WAN Tap, Bandwidth Monitor** **MCREWS**
▪ **Reduction, validation, data analysis & AAR**	* **DPU** [Data Processing Unit] * **GRETA** [Graphical Real Time Analysis] **DCARS** [Digital Collection, Analysis & Review System] * **Stargen**
▪ **Test infrastructure**	**Digital microwave** **Test radios**
▪ **Data repository**	**Alexandria**
▪ **TSPI**	**GTT** [GPS Tracker/Tactical Radio Enclosure] **T2P2** [Tenacious Timekeeper Position Plus] **Range instrumentation**
▪ **Engineering analysis**	**Orion**

* component of C3 Driver

Orion

Suite of electromagnetic engineering tools



- ✓Test Planning
- ✓Synthetic Environments
- ✓Engineering Analysis

- Software suite
- PC-based
- Assesses comm systems in their intended EM environments

Capabilities

- RF Link Analysis
- Area mode analysis
- Antenna Modeling
- 3D viewing
- Interfaces to external simulations, live players
- Supports DIS and HLA protocols

FY04 Contracts

OBJECTIVE:	**3D Graphics**
CONTRACT TYPE:	**Fixed Price**
SMALL BUSINESS SET-ASIDE:	**Yes**
DURATION:	**Thru FY04**
ESTIMATED COST:	**$150K**
CONTRACTOR:	**Global Majic Software, Inc.** **Huntsville, AL**

FY04 Contracts (cont)

OBJECTIVE:	**Network Engineering**
CONTRACT TYPE:	**Fixed Price**
SMALL BUSINESS SET-ASIDE:	**Yes**
DURATION:	**Thru FY06**
ESTIMATED COST:	**$90K initial**
CONTRACTOR:	**XPRT Solutions, Inc.** **Eatontown, NJ**

FY04 Contracts (cont)

OBJECTIVE:	**Eqpt for Antenna Test Facility**
CONTRACT TYPE:	**Fixed Price**
SMALL BUSINESS SET-ASIDE:	**No**
DURATION:	**Thru FY04**
ESTIMATED COST:	**$376K**
CONTRACTOR:	**T.A. Caid** **Tucson, AZ**

Technology Areas

- **Miniaturization**
- **Embedded Instrumentation**
- **Networks**
- **Propagation Models**
- **Remote sensing**
- **Spectrum monitoring**
- **High density RF environments**

Contact Info

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FEDBIZOPPS

(White Sands Contracting Office)